APRIL/MAY 2024

DECH34A/GECH34A — SCIENTIFIC RESEARCH METHODOLOGY

Time : Three hours Maximum : 75 marks

Shanmuga Industries Arts & Science College T.V.Malai

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Write two principles of research.
2. What do you mean by citation index?
3. Explain methods of separation prior to analysis.
4. What is meant by crystallization?
5. Define reliability.
6. How will you distribute random errors?
7. Write two criteria for rejection of observation.
8. Briefly explain finite samples.
9. In brief give explanation on appendices.
10. Give two uses of foot notes.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

Each answer should not exceed 250 words.

11. (a) Write a note on selective problems on research.

Or

(b) Explain in detail about importance of patents.

12. (a) Discuss about the following isolation techniques (i) Sublimation, (ii) Distillation under reduced pressure.

Or

(b) Explain in detail about (i) explosives, (ii) radioactive materials.

13. (a) In detail explain about (i) precision, (ii) accuracy.

Or

(b) Normal distribution curve -Give a detailed explanation.

14. (a) Write a note on (i) significant figures, (ii) computation rules.

Or

(b) Explain in detail about (i) q-test, (ii) f-test.

15. (a) Write a detailed note on the concept of general format.

Or

(b) In detail explain about the convention of writing.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. In detail explain about literature survey.

17. Write a detailed note on chemistry of working with hazardous materials.

18. Discuss in detail about (a) determinate, (b) random errors.

19. Elaborately discuss about (a) data plotting, (b) least square analysis

20. Explain in detail about the meanings and examples of commonly used abbreviations.

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